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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,552	05/22/2000	Jaime L. Prieto Jr.	22-0099	1282

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EXAMINER

JONES, PRENELL P

ART UNIT	PAPER NUMBER
2667	6

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/575,552

Applicant(s)

PRIETO JR. ET AL.

Examiner

Prenell P Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 3/17/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-21 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☐ Claim(s) 4, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Vaid et al.

Regarding claims 1-3, 5, 6, 8 and 10, Jorgensen discloses (Abstract) communication in a satellite system that includes (Fig. 6-8, col. 48, line 26 thru col. 50, line 30) communication in the uplink/downlink directions, upstream data/downstream data, downlink/uplink flow scheduler, resource allocator allocates resource bandwidth, (col. 3, line 45 thru col. 4, line 2, col. 48, line 25 thru col. 49, line 67, col. 51, line 11 thru 52, line 67) data packets placed in priority class queues based on quality of service requirements, prioritization and scheduling of bandwidth is performed in the uplink path/channel, scheduling

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functions/resource allocation placed at the base station, scheduling in real-time, scheduling takes in account resource requirements, service level agreement, (col. 14, line 39 thru col. 16, line 35), QOS mechanism monitors/optimizes traffic parameters, (col. 22, line 1-67) IP streams of data, appropriate QOS parameters are assigned to data streams based on priority, monitoring services (QOS), real-time transport protocol (RTP) provides mandatory monitoring, (col. 60, line 37-60) temporarily store packets, (col. 70, line 45-61) lookup table for QoS requirements/reservation request (service schedule lookup table), col. 17, line 49 thru col. 18, line 9) fair queuing algorithm used to calculate guaranteed queuing resources based on bandwidth availability, (col. 51, line 11 thru col. 52, line 67) set of priorities by downlink flow scheduler are used to place received data packets in priority class queue, bandwidth associated with priority class queue and associated packets is monitored/managed because depending on the priority of the data associated with the queue a required amount of bandwidth is allocated, (Fig. 13) a flow scheduler (packet service schedule), (col. 48, line 58 thru col. 49, line 1) flow scheduler schedules flow in downlink, wherein large amounts of data is allocated to a certain priority class, (col. 50, line 31-45) whereby downlink flow scheduler places data packets in of IP flow into a class queue based on class queue priorities, change flow scheduler based on bandwidth requirements associated with the priority of data packets. Jorgensen is silent on monitoring actual bandwidth. In analogous art, Vaid (col. 17, line 17-35 discloses in a communication system that monitors/manages actual bandwidth associated with different classes and priority classes are serviced

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along with associated queues. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement monitoring actual bandwidth associated with servicing priority classes and associated queues by Vaid with the teachings of Jorgensen for the purpose of further managing/minimizing congestion/latency in a communication system that communicates data packets with priority class status.

Regarding claim 7, as indicated above, Jorgensen discloses (Abstract) communication in a satellite system that includes (Fig. 6-8, col. 48, line 26 thru col. 50, line 30) communication in the uplink/downlink directions, upstream data/downstream data, downlink/uplink flow scheduler, resource allocator allocates resource bandwidth, (col. 3, line 45 thru col. 4, line 2, col. 48, line 25 thru col. 49, line 67, col. 51, line 11 thru 52, line 67) data packets placed in priority class queues based on quality of service requirements, prioritization and scheduling of bandwidth is performed in the uplink path/channel, scheduling functions/resource allocation placed at the base station, scheduling in real-time, scheduling takes in account resource requirements, service level agreement, (col. 14, line 39 thru col. 16, line 35), QOS mechanism monitors/optimizes traffic parameters, (col. 22, line 1-67) IP streams of data, appropriate QOS parameters are assigned to data streams based on priority, monitoring services (QOS), real-time transport protocol (RTP) provides mandatory monitoring, he further discloses (col. 70, line 45-61) lookup table for QoS requirements/reservation request (service schedule lookup table).

Regarding claim 9, as indicated above, Jorgensen discloses (Abstract) communication in a satellite system that includes (Fig. 6-8, col. 48, line 26 thru col. 50, line 30) communication in the uplink/downlink directions, upstream data/downstream data, downlink/uplink flow scheduler, resource allocator allocates resource bandwidth, (col. 3, line 45 thru col. 4, line 2, col. 48, line 25 thru col. 49, line 67, col. 51, line 11 thru 52, line 67) data packets placed in priority class queues based on quality of service requirements, prioritization and scheduling of bandwidth is performed in the uplink path/channel, scheduling functions/resource allocation placed at the base station, scheduling in real-time, scheduling takes in account resource requirements, service level agreement, (col. 14, line 39 thru col. 16, line 35), QOS mechanism monitors/optimizes traffic parameters, (col. 22, line 1-67) IP streams of data, appropriate QOS parameters are assigned to data streams based on priority, monitoring services (QOS), real-time transport protocol (RTP) provides mandatory monitoring. He further discloses (col. 17, line 49 thru col. 18, line 9) fair queuing algorithm used to calculate guaranteed queuing resources based on bandwidth availability.

***Allowable Subject Matter***

3. Claims 13-21 are allowed.
4. Claims 4, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is

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a statement of reason for indicating allowable subject matter: Although the cited art, Jorgensen and Vaid et al, discloses storing packets in priority class queues, communication in a satellite system that includes, communication in the uplink/downlink directions, upstream data/downstream data, downlink/uplink flow scheduler, resource allocator allocates resource bandwidth, data packets placed in priority class queues based on quality of service requirements, prioritization and scheduling of bandwidth is performed in the uplink path/channel, scheduling functions/resource allocation placed at the base station, scheduling in real-time, scheduling takes in account resource requirements, service level agreement, QOS mechanism monitors/optimizes traffic parameters, IP streams of data, appropriate QOS parameters are assigned to data streams based on priority, monitoring services (QOS), real-time transport protocol (RTP) provides mandatory monitoring, temporarily store packets, lookup table for QoS requirements/reservation request (service schedule lookup table), fair queuing algorithm used to calculate guaranteed queuing resources based on bandwidth availability. Jorgensen is silent on storing packet data from a plurality of channels associated with a priority class queue, lookup table for QoS requirements/reservation request (service schedule lookup table, a plurality of uplink channels, they fail to teach/suggest a scheduler changing an amount of bandwidth allocated to at least one queue while said queue is buffering data packets between an uplink and downlink, measuring a phase of each stream stored in priority class queue as being indicative of an amount of the time lapsed

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since a data packet from a particular priority-class queue was output to the downlink channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 703-305-0630. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

June 9, 2004

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
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